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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 130588.91477

First Inventor Hyunchul C. Kim

Title Apparatus and Method of Using Thin ...

Express Mail Label No. EL988554298US

USPTO  
10/670413  
1575  
092403

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

- Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
- Applicant claims small entity status.  
See 37 CFR 1.27.
- Specification [Total Pages 19]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) [ Total Sheets 5 ]
- Oath or Declaration [ Total Pages 2 ]
  - Newly executed (original or copy)
  - Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)

i.  **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:** Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

7.  CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a.  Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i.  CD-ROM or CD-R (2 copies); or
    - ii.  paper
  - c.  Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9.  Assignment Papers (cover sheet & document(s))
10.  37 CFR 3.73(b) Statement  Power of Attorney (when there is an assignee)
11.  English Translation Document (if applicable)
12.  Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15.  Certified Copy of Priority Document(s) (if foreign priority is claimed)
16.  Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17.  Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No. \_\_\_\_\_ / \_\_\_\_\_

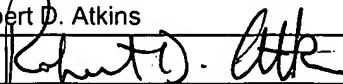
Prior application information: Examiner \_\_\_\_\_

Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

<input checked="" type="checkbox"/> Customer Number	26707		or	<input type="checkbox"/> Correspondence address below	
Name	Robert D. Atkins				
Address	QUARLES & BRADY STREICH LANG LLP One Renaissance Square, Two North Central Avenue				
City	Phoenix	State	AZ	Zip Code	85004
Country	United States	Telephone	602-229-5200	Fax	602-229-5690

Name (Print/Type)	Robert D. Atkins	Registration No. (Attorney/Agent)	34,288
Signature			Date 9/24/03

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450 Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 484.00)

## Compl t If Known

Application Number	
Filing Date	September 24, 2003
First Named Inventor	Hyunchul C. Kim
Examiner Name	
Art Unit	
Attorney Docket No.	130588.91477

## METHOD OF PAYMENT (check all that apply)

 Check  Credit card  Money Order  Other  None
 Deposit Account:

Deposit Account Number  
17-0055

Deposit Account Name  
Quarles & Brady LLP

The Commissioner is authorized to: (check all that apply)

 Charge fee(s) indicated below  Credit any overpayments  
 Charge any additional fee(s) during the pendency of this application  
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)		
1001 750	2001 375	Utility filing fee	375
1002 330	2002 165	Design filing fee	
1003 520	2003 260	Plant filing fee	
1004 750	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	

SUBTOTAL (1) (\$ 375.00)

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Fee from below	Fee Paid
Total Claims	23	-20* = 3 x 9 = 27.00	
Independent Claims	4	-3** = 1 x 42 = 42.00	
Multiple Dependent			

Large Entity	Small Entity	Fee Description
Fee Code (\$)	Fee Code (\$)	
1202 18	2202 9	Claims in excess of 20
1201 84	2201 42	Independent claims in excess of 3
1203 280	2203 140	Multiple dependent claim, if not paid
1204 84	2204 42	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 69.00)

\*\*or number previously paid, if greater; For Reissues, see above

## 3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)		
1051 130	2050 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 410	2252 205	Extension for reply within second month	
1253 930	2253 465	Extension for reply within third month	
1254 1,450	2254 725	Extension for reply within fourth month	
1255 1,970	2255 985	Extension for reply within fifth month	
1401 320	2401 160	Notice of Appeal	
1402 320	2402 160	Filing a brief in support of an appeal	
1403 280	2403 140	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,300	2453 650	Petition to revive - unintentional	
1501 1,300	2501 650	Utility issue fee (or reissue)	
1502 470	2502 235	Design issue fee	
1503 630	2503 315	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	40.00
1809 750	2809 375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810 750	2810 375	For each additional invention to be examined (37 CFR § 1.129(b))	
1801 750	2801 375	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	
Other fee (specify)			

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40.00)

## SUBMITTED BY

Name (Print/Type)	Robert D. Atkins	Registration No. (Attorney/Agent)	34,288	Telephone	602-229-5200
Signature				Date	9 24 03

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Doc. No. 1774332

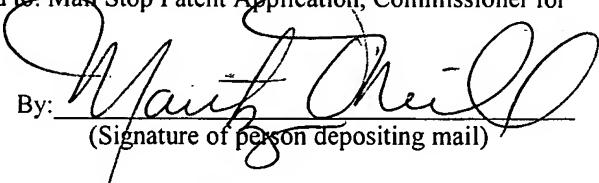
Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

**EXPRESS MAIL CERTIFICATE: EL988554298US**

I hereby certify that this correspondence listed below is being deposited with the United States Postal Service on the date set forth below as Express Mail in an envelope addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Signature  
and Deposit: September 24, 2003

By:

  
(Signature of person depositing mail)

MARITZA O'NEILL

**CERTIFICATE OF MAILING PURSUANT TO 37 C.F.R. 1.10**

In re Application of: Kim *et al.*

Serial No.: To be assigned

Filed: September 24, 2003

For: *APPARATUS AND METHOD OF  
USING THIN FILM MATERIAL AS  
DIFFUSION BARRIER FOR  
METALLIZATION*

Attorney Docket No.: 130588.91477

Group Art Unit: Unassigned

Examiner: Unassigned

**Mail Stop: Patent Application**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Type of Filing:

- 1) Utility Transmittal
- 2) Fee Transmittal
- 3) Patent Application (19 pages plus cover sheet )
- 4) Drawings (5 sheets)
- 5) Executed Declaration (2 pages)
- 6) Power of Attorney forms (2)
- 7) Executed Assignment (2)
- 8) Recordation Form Cover Sheet
- 9) Information Disclosure Statement, together with Form PTO-1449
- 10) Cited References (6)
- 11) Return receipt postcard